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RECEIVED CENTRAL FAX CENTER

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

NOV 3 0 2007

## **Patent Application**

Inventor(s): Nagarajan et al.

Filed:

May 4, 2001

Case:

Nagarajan 13-10 (LCNT/122459)

Serial No.:

09/849,187

Group Art Unit:

2616

Examiner:

Robert W. Wilson

Title:

TRAFFIC GROOMING METHODS FOR UNDERSEA TRUNK AND

BRANCH ARCHITECTURES

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Date

SIR:

#### APPEAL BRIEF

Appellants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2616 mailed July 9, 2007 finally rejecting claims 1, 3-6, 8-10, 14, 15 and 17-19. In the event that an extension of time is required for this Appeal Brief to be considered timely, and a petition therefor does not otherwise accompany this appeal brief, any necessary extension of time is hereby petitioned for.

Appellants previously filed an Appeal Brief on December 4, 2006. At the time the previous Appeal Brief was filed, Appellants were charged an Appeal Brief fee of \$500. In response to the previous Appeal Brief, prosecution of the case was reopened. Thus, Appellants may apply the \$500 paid for the previously filed Appeal Brief to the present Appeal Brief. Since the current Appeal Brief fee is \$510, the Commissioner is authorized to charge the difference between the current Appeal Brief fee and the previously paid Appeal Brief fee (\$10), and any other fees due to make this filing timely and complete (including extension of time fees), to Deposit Account No. 20-0782/LCNT/122459.

Adjustment date: 12/04/2007 SFELEKE1 12/04/2006 INTEFSW 00001515 09849187 01 FC:1402

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## Real Party in Interest

The real party in interest is LUCENT TECHNOLOGIES INC.

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## Related Appeals and Interferences

Appellants assert that no appeals or interferences are known to Appellants, Appellants' legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

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## **Status of Claims**

Claims 1, 3-6, 8-10, 14, 15 and 17-19 are pending in the application. Claims 1-18 were originally presented in the application. Claim 19 was added. Claims 2, 7, 11-13 and 16 were cancelled. Claims 1, 3-6, 8-10, 14-15 and 17-19 were amended. Claims 1, 3-6, 8-10, 14, 15 and 17-19 stand finally rejected as discussed below. The final rejection of claims 1, 3-6, 8-10, 14, 15 and 17-19 is appealed.

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## **Status of Amendments**

All claim amendments have been entered.

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## Summary of Claimed Subject Matter

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Embodiments of the present invention are generally directed to a traffic grooming method referred to as selective grooming. In selective grooming, a first type-one node (e.g., a low-traffic node) is directly coupled to: (1) a second type-one node via a highcapacity trunk, and (2) a type-two node (e.g., a high-traffic node) via a high-capacity trunk. In selective grooming, a portion of the client signals at the first type-one node that are destined for the second type-one node are groomed into the high-capacity trunk to the type-two node (rather than sending all client signals from the first type-one node to the second type-one node via the high capacity trunk which connects the first type-one node and second type-one node).

For the convenience of the Board of Patent Appeals and Interferences, Appellants' independent claims 1, 6 and 14 are presented below with citations to various figures and appropriate citations to at least one portion of the specification for elements of the appealed claims.

Claim 1 positively recites (with reference numerals, where applicable, and cites to at least one portion of the specification added):

- (previously presented) A first type one node (505) for grooming low capacity client signals(507) into a high capacity signal, comprising:
- a first interface (865) to a first high capacity trunk (515) for directly coupling to a second type one node (520); and
- a second interface (871) to a second high capacity trunk for directly coupling to a type two node (CO B);

wherein only a portion of those low capacity client signals (506, 507) destined for the second type one node (520) are groomed into the second high capacity trunk to the type two node (CO B).

Support may be found in at least the following portions of Appellants' specification: Pg. 2, Lines 6-10; Pg. 7, Lines 3-6; Pg. 8, Lines 6-10.

Claim 6 positively recites (with reference numerals, where applicable and cites to at least one portion of the specification added):

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6. (previously presented) An apparatus for performing selective grooming of client signals, the apparatus comprising:

a first type one node (505) coupled (a) directly to a second type one node (520) via a first interface (865) to a first high capacity trunk, and (b) directly to a type two node (CO B) via a second interface (871) to a second high capacity trunk, such that only a portion of the client signals (506, 507) destined for the second type one node (520) are groomed into the second high capacity trunk to the type two node (CO B).

Support may be found in at least the following portions of Appellants' specification: Pg. 2, Lines 6 - 10; Pg. 7, Lines 3 - 6; Pg. 8, Lines 6 - 10.

Claim 14 positively recites (with reference numerals, where applicable and cites to at least one portion of the specification added):

14. (previously presented) A method for use in a first type one node (505), the method comprising the steps of:

receiving low capacity client signals (506, 507);

selectively grooming a portion of the received low capacity client signals (506) into a first high capacity trunk directly coupled to a second type one node (520) for transmission to the second type one node (520); and

transmitting others of the low capacity client signals (507) over a second high capacity trunk directly coupled to a type two node;

wherein said others of the low capacity signals (507) transmitted over the second high capacity trunk comprise low capacity client signals destined for the second type one node (520).

Support may be found in at least the following portions of Appellants' specification: Pg. 2, Lines 6-10; Pg. 7, Lines 3-6; Pg. 8, Lines 6-10.

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# Grounds of Rejection to be Reviewed on Appeal

Claims 1, 3, 6, 8, 14 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Remein (U.S. Patent No. 6,477,142, hereinafter "Remein").

Claims 4, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remein in view of Appellants' specification admitted prior art.

Claims 5, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remein in view of Tyrrell (U.S. Patent No. 5,185,736, hereinafter "Tyrrell").

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Remein in view of Dravida.

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#### Arguments

## Rejections Under 35 U.S.C. 102(e)

#### Claims 1, 3, 6, 8, 14 and 18

### Claims 1 and 3

Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Remein. The rejection is traversed.

In general, Remein discloses a method for increasing bandwidth of a unidirectional path switched SONET ring network. The bandwidth is increased by sacrificing protection of the information carried on the path switched SONET ring network. More specifically, as disclosed in Remein, the method alters the way in which information is added to the ring network at a node and how the information is dropped at other nodes on the ring. (Remein, Abstract).

Remein, however, fails to teach or suggest each and every element of Appellants' claim 1, as arranged in the claim. Namely, Remein fails to teach or suggest at least the limitation of "a first interface to a first high capacity trunk for directly coupling to a second type one node," as claimed in Appellants' claim 1.

In the Final Office Action dated July 9, 2007, the Examiner asserts that the configuration of Figure 3 of Remein teaches Appellents' claim 1. Specifically, the Examiner asserts that node 38 of Figure 3 teaches the first type one node, that node 39 of Figure 3 teaches Appellants' second type one node, and that node 32 or node 34 of Figure 3 teaches Appellants' type two node. Appellants respectfully disagree.

Appellants respectfully submit that, even assuming that nodes 38 and 39 may be considered to be type one nodes and nodes 32 and 34 may be considered to be type two nodes, nodes 38 and 39 of Remein are not directly coupled but, rather, are indirectly coupled via intervening nodes 32 and 34. In other words, referring to Figure 3 of Remein, Remein merely teaches a type one node (node 38) directly coupled to two different type two nodes (nodes 32 and 34). Thus, since nodes 38 and 39 of Remein are not directly coupled, Remein fails to teach or suggest Appellants' limitation of "a first interface to a

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first high capacity trunk for directly coupling to a second type one node," as claimed in Appellants' claim 1.

In the Response to Arguments section of the Final Office Action dated July 9, 2007, the Examiner asserts that "[d]irectly coupled is not defined in applicants' specification as directly connected; therefore, directly coupled has a broad meaning." (Final Office Action, Pg. 7). Similarly, the Examiner asserts that "[t]he applicants' specification does not define directly coupled as meaning directly connected." (Final Office Action, Pg. 8). Additionally, the Examiner asserts that "[c]ouple means indirect connection." Appellants respectfully disagree.

MPEP § 2111.01 states that "[t]he words of a claim must be given their 'plain meaning' unless such meaning is inconsistent with the specification." Webster's Unabridged Dictionary defines the word "couple" as meaning "10. to join; connect." (Random House Webster's Unabridged Dictionary, Second Edition, Emphasis added). Appellants note that nothing in Appellants' specification attempts to give the term "coupled" a meaning inconsistent with this dictionary definition. Thus, the term "coupled" used in Appellants' specification and claims must be given its plain meaning of "connected". Furthermore, Appellants have included the word "directly" before "coupled" to clarify that the first interface is for directly connecting to a second type one node, rather than for connecting to a second type one node via other type one or type two nodes.

Additionally, Appellants respectfully submit that the Examiner impermissibly gives the word "coupled" a meaning that is contradictory to its dictionary definition. Specifically, as noted hereinabove, the Examiner has interpreted the word "coupled" as being an indirect connection in order to attempt to fit the teachings of Remein to the limitations of Appellants' claim 1. This definition of "coupled" relied upon by the Examiner is clearly contradictory to the established definition of "coupled". Furthermore, this definition relied upon by the Examiner is contradictory to the teachings of Appellants' specification. Therefore, the Appellants respectfully submit that, since the basis of the Examiner's rejection relies upon an impermissible interpretation of the word "coupled," the Examiner's rejection is improper.

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Additionally, the Examiner asserts that "[c]oupled is a word of art. 'Coupled' in the art is an indirect connection. The word of art for a direct connection is a direct connection." (Advisory Action). Appellants respectfully submit that, even if the Examiner's assertion is true, this does not permit the Examiner to redefine the terms of Appellants' claims in a manner inconsistent with Appellants' specification. As stated hereinabove, Appellants may act as their own lexicographers. In other words, while the Examiner may be able to give Appellants' claims their broadest reasonable interpretation, here the Examiner is attempting to redefine the terms of Appellants' claims in a manner inconsistent with Appellants' specification. This is clearly impermissible. Thus, the Examiner's rejection is improper.

Furthermore, Appellants respectfully submit that Appellants' specification and drawings clearly show direct connections between network elements.

First, Appellants' specification states that "...a low traffic node (e.g., CS 505) is coupled (a) directly to an other low traffic node (e.g., CS 520) via a high capacity trunk." (Specification, Pg. 8, Lines 6-8, Emphasis added). Furthermore, Appellants' Figures clearly show a direct connection between two cable stations (namely, between CS 505 and CS 520) that does not include any other cable stations or central offices between those nodes. Based on this combination of Appellants' specification and associated drawings, Appellants submit that it is abundantly clear that the Examiner is interpreting the "directly coupling" portion of Appellants' limitation of "a first interface to a first high capacity trunk for directly coupling to a second type one node" too broadly.

Second, Appellants' specification states, with respect to Figure 5, that "...there is a separate STM-1 pipe coupling CS 505 with CO B. In such an arrangement, where separate pipes couple cable stations directly to central offices, 'back hauling' may occur." (Specification, Pg. 7, Lines 3-6, Emphasis added). Furthermore, Appellants note that Appellants' Figures clearly show a direct connection between a cable station (illustratively, CS 505) and a central office (illustratively, CO B) that does not include any other cable stations or central offices between those nodes. Based on this combination of Appellants' specification and associated drawings, Appellants submit that it is abundantly clear that the Examiner is interpreting the "directly coupling" portion of Serial No. 09/849,187 Page 13 of 24

Appellants' limitation of "a second interface to a second high capacity trunk for directly coupling to a type two node" too broadly.

Moreover, in the Response to Arguments section of the Final Office Action dated July 9, 2007, the Examiner asserts that "[t]he Appellant intentionally has not used the wording in the claim directly connected; therefore, the Examiner has interpreted directly coupled as reading on a path between two devices." (Final Office Action, Pg. 8). In the Advisory Action dated September 13, 2007, the Examiner adds that "[i]f the applicant had intended for the connection to be a direct connection then they could have used the well-known English and inserted direct connection as an amendment." (Advisory Action). Appellants respectfully disagree.

Appellants note that the Appellants' use of the term "directly coupled" in the claims in based on the Appellants' use of the term "directly coupled" throughout the specification. Appellants are merely trying to ensure that the language of the claims conforms to the language of the specification. For at least the reasons described hereinabove, it is clear that the term "directly coupled" as used in Appellants' claims means a direct connection between the network elements that does not traverse any other type one or type two nodes. This is clear from Appellants' specification and drawings, as well as Webster's Unabridged Dictionary (which, as shown hereinabove, defines the word "coupled" using the word "connected"). Thus, the Examiner's assertion is without merit.

Therefore, for at least the reasons cited hereinabove, Appellants respectfully submit that there is clearly support in Appellants' specification for the limitations of "a first interface to a first high capacity trunk for directly coupling to a second type one node" and "a second interface to a second high capacity trunk for directly coupling to a type two node." Furthermore, the Examiner's interpretation of the term "coupled" as an indirect connection is impermissible. In the absence of such an interpretation, the Examiner's rejection in view of Remein clearly cannot be sustained.

Returning to the Examiner's arguments with respect to the teachings of Remein, in the Final Office Action dated July 9, 2007, the Examiner asserts that the configuration of Figure 3 of Remein teaches Appellants' claim 1. Specifically, the Examiner asserts that node 38 of Figure 3 teaches the first type one node for grooming low capacity client

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signals into a high capacity signal. Furthermore, the Examiner asserts that interface 38a of node 39 teaches an interface to a first high capacity trunk and an interface to a second high capacity trunk. (Office Action, Pg. 5).

For at least the reasons cited hereinabove, Appellants respectfully submit that it is clear that "directly coupled" refers to a direct connection. Accordingly, since nodes 38 and 39 of Remein are not directly coupled but, rather, are indirectly coupled via intervening nodes 32 and 34, Appellants respectfully submit that Remein fails to teach or suggest Appellants' limitation of "a first interface to a first high capacity trunk for directly coupling to a second type one node," as claimed in Appellants' claim 1. As such, Remein fails to teach or suggest each and every limitation of Appellants' claim 1, as arranged in the claim.

Moreover, Appellants respectfully note that the Advisory Action dated September 13, 2007 appears to fail to put forth any additional arguments or reasoning for the rejection of Appellants' claim 1 in view of Remein.

Anticipation requires in a single prior art disclosure of each and every element of the claimed invention, arranged as in the claim. Remein fails to disclose each and every element of Appellants' claim 1, as arranged in the claim.

As such, independent claim 1 is not anticipated by Remein and is patentable under 35 U.S.C. §102. Furthermore, since all of the dependent claims that depend from the independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Remein.

Therefore, Appellants' claims 1 and 3 are allowable over Remein under 35 U.S.C. 102(e). The Examiner is respectfully requested to withdraw the rejection.

## Claims 6 and 8

Claims 6 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Remein. The rejection is traversed.

Claim 6 includes limitations similar to the limitations of Appellants' claim 1. As described hereinabove, Remein fails to teach or suggest each and every limitation of Appellants' claim 1, as arranged in the claim. Thus, for at least the same reasons discussed herein with respect to claim 1, Appellants respectfully submit that Remein also

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fails to teach or suggest each and every limitation of Appellants' claim 6, as arranged in the claim. Specifically, Remain fails to teach or suggest at least the limitation of "a first type one node coupled (a) directly to a second type one node via a first interface to a first high capacity trunk," as claimed in Appellants' claim 6.

As such, independent claim 6 is not anticipated by Remein and is patentable under 35 U.S.C. §102. Furthermore, since all of the dependent claims that depend from the independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Remein.

Therefore, Appellants' claims 6 and 8 are allowable over Remein under 35 U.S.C. 102(e). The Examiner is respectfully requested to withdraw the rejection.

## Claims 14 and 18

Claims 14 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Remein. The rejection is traversed.

Claim 14 includes limitations similar to the limitations of Appellants' claim 1. As described hereinabove, Remein fails to teach or suggest each and every limitation of Appellants' claim 1, as arranged in the claim. Thus, for at least the same reasons discussed herein with respect to claim 1, Appellants respectfully submit that Remein also fails to teach or suggest each and every limitation of Appellants' claim 14, as arranged in the claim. Specifically, Remain fails to teach or suggest at least the limitation of "selectively grooming a portion of the received low capacity client signals into a first high capacity trunk directly coupled to a second type one node for transmission to the second type one node," as claimed in Appellants' claim 14.

As such, independent claim 14 is not anticipated by Remein and is patentable under 35 U.S.C. §102. Furthermore, since all of the dependent claims that depend from the independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Remein.

Therefore, Appellants' claims 14 and 18 are allowable over Remein under 35 U.S.C. 102(e). The Examiner is respectfully requested to withdraw the rejection.

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#### Rejections Under 35 U.S.C. 103(a)

#### Claims 4, 9 and 17

Claims 4, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remein in view of Appellants' specification admitted prior art.

Claims 4, 9 and 17 depend from independent claims 1, 6, and 14, respectively. The rejection of claims 4, 9 and 17 is predicated on the validity of the rejection of claims 1, 6, and 14 under 35 U.S.C. 102 given Remein. Since the rejection of claims 1, 6, and 14 under 35 U.S.C. 102 given Remein has been overcome, as described hereinabove, and there is no argument put forth by the Office Action that Appellants' specification admitted prior art supplies that which is missing from Remein to render the independent claims unpatentable, the rejection of claims 4, 9 and 17 cannot be maintained.

Furthermore, Appellants respectfully submit that Appellants' specification admitted prior art fails to teach or suggest "a first interface to a first high capacity trunk for directly coupling to a second type one node," as claimed in Appellants' claim 1. Similarly, Appellants' specification admitted prior art fails to teach or suggest similar limitations of Appellants' claims 6 and 14. Rather, Appellants' specification admitted prior art merely discloses prior art trunk and branch arrangements for use in an undersea cable system.

Therefore, Appellants' claims 4, 9 and 17 are allowable over Remein in view of Appellants' specification admitted prior art under 35 U.S.C. 103(a). The Examiner is respectfully requested to withdraw the rejection.

#### Claims 5, 10 and 15

Claims 5, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remein in view of Tyrrell.

Claims 5, 10, and 15 depend from independent claims 1, 6, and 14, respectively. The rejection of claims 5, 10, and 15 is predicated on the validity of the rejection of claims 1, 6, and 14 under 35 U.S.C. 102 given Remein. Since the rejection of claims 1, 6, and 14 under 35 U.S.C. 102 given Remein has been overcome, as described hereinabove, and there is no argument put forth by the Office Action that Tyrrell supplies that which is

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missing from Remein to render the independent claims unpatentable, the rejection of claims 5, 10, and 15 cannot be maintained.

Furthermore, Appellants respectfully submit that Tyrrell fails to teach or suggest "a first interface to a first high capacity trunk for directly coupling to a second type one node," as claimed in Appellants' claim 1. Similarly, Tyrrell fails to teach or suggest similar limitations of Appellants' claims 6 and 14. Rather, Tyrrell merely discloses a SONET system for interfacing SONET formatted channels to lower speed channels in either a SONET format or other formats.

Therefore, Appellants' claims 5, 10 and 15 are allowable over Remein in view of Tyrrell under 35 U.S.C. 103(a). The Examiner is respectfully requested to withdraw the rejection.

#### Claim 19

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Remein in view of Dravida.

Claim 19 depends from independent claim 1. The rejection of claim 19 is predicated on the validity of the rejection of claim 1 under 35 U.S.C. 102 given Remein. Since the rejection of claim 1 under 35 U.S.C. 102 given Remein has been overcome, as described hereinabove, and there is no argument put forth by the Office Action that Dravida supplies that which is missing from Remein to render independent claim 1 unpatentable, the rejection of claim 19 cannot be maintained.

Furthermore, Appellants respectfully submit that Dravida fails to teach or suggest "a first interface to a first high capacity trunk for directly coupling to a second type one node," as claimed in Appellants' claim 1. Similarly, Dravida fails to teach or suggest similar limitations of Appellants' claims 6 and 14. Rather, Dravida merely discloses a congestion control scheme for connectionless networks, which relieves congestion by routing a portion of traffic on a congested primary path onto a predefined alternate path constructed such that loop-freedom is guaranteed.

Therefore, Appellants' claim 19 is allowable over Remein in view of Dravida under 35 U.S.C. 103(a). The Examiner is respectfully requested to withdraw the rejection.

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### Conclusion

Thus, Appellants submit that all of the claims presently in the application are allowable under the provisions of 35 U.S.C. 102 and 103.

For the reasons advanced above, Appellants respectfully urge that the rejections of claims 1, 3-6, 8-10, 14, 15 and 17-19 are improper. Reversal of the rejections of the Final Office Action is respectfully requested.

Respectfully submitted,

Dated: /1/30/07

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#### CLAIMS APPENDIX

### LISTING OF CLAIMS:

- (previously presented) A first type one node for grooming low capacity client 1. 1
- signals into a high capacity signal, comprising:
- a first interface to a first high capacity trunk for directly coupling to a second type 3
- one node; and
- a second interface to a second high capacity trunk for directly coupling to a type 5
- two node; 6
- wherein only a portion of those low capacity client signals destined for the second 7
- type one node are groomed into the second high capacity trunk to the type two node.
  - 2. (cancelled)
- (previously presented) The apparatus of claim 1, wherein the type two node is a **)** 3.
- high traffic node.
- (previously presented) The apparatus of claim 1, wherein the second type one 1 4.
- node is an enhanced cable station and the type two node is a central office.
- (previously presented) The apparatus of claim 1, wherein the low capacity client 5.
- signals comprise plesiochronous digital hierarchy signals and the high capacity signal
- 3 comprises a synchronous transport module signal.
- (previously presented) An apparatus for performing selective grooming of client 1 6.
- signals, the apparatus comprising:
- a first type one node coupled (a) directly to a second type one node via a first 3
- interface to a first high capacity trunk, and (b) directly to a type two node via a second
- interface to a second high capacity trunk, such that only a portion of the client signals

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- 6 destined for the second type one node are groomed into the second high capacity trunk to
- 7 the type two node.
  - 7. (cancelled)
- 1 8. (previously presented) The apparatus of claim 6, wherein the second type one
- 2 node is a low traffic node and the type two node is a high traffic node.
- 1 9. (previously presented) The apparatus of claim 6, wherein the second type one
- 2 node is an enhanced cable station and the type two node is a central office.
- 1 10. (previously presented) The apparatus of claim 6, wherein the client signals
- 2 comprise plesiochronous digital hierarchy signals and the first high capacity trunk and the
- second high capacity trunk each support a synchronous transport module signal.
  - 11. (cancelled)
  - 12. (cancelled)
  - 13. (cancelled)
- 1 14. (previously presented) A method for use in a first type one node, the method
- 2 comprising the steps of:
- 3 receiving low capacity client signals;
- 4 selectively grooming a portion of the received low capacity client signals into a
- 5 first high capacity trunk directly coupled to a second type one node for transmission to
- 6 the second type one node; and
- 7 transmitting others of the low capacity client signals over a second high capacity
- 8 trunk directly coupled to a type two node;

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- wherein said others of the low capacity signals transmitted over the second high
- 10 capacity trunk comprise low capacity client signals destined for the second type one
- 11 node.
- 1 15. (previously presented) The method of claim 14, wherein the low capacity client
- 2 signals comprise plesiochronous digital hierarchy signals, and the first high capacity
- 3 trunk and the second high capacity trunk each support a synchronous transport module
- 4 signal.
  - 16. (cancelled)
- 1 17. (previously presented) The method of claim 14, wherein the second type one node
- 2 is an enhanced cable station and the type two node is a central office.
- 1 18. (previously presented) The method of claim 14 wherein the second type one node
- 2 is a low traffic node and the type two node is a high traffic node.
- 1 19. (previously presented) The apparatus of claim 1, wherein grooming of the portion
- 2 of those low capacity client signals destined for said second type one node into the
- 3 second high capacity trunk to said type two node further comprises:
- determining an aggregate amount of traffic between said first type one node and
- 5 said second type one πode;
- 6 determining whether said aggregate amount of traffic between said first type one
- 7 node and said second type one node exceeds a predetermined threshold, said
- 8 predetermined threshold comprising a fraction of a capacity of said first high capacity
- 9 trunk directly coupling said first type one node and said second type one node; and
- 10 if said aggregate amount of traffic between said first type one node and said
- 11 second type one node does not exceed said predetermined threshold, routing said amount
- 12 of traffic from said first type one node over said second high capacity trunk to said
- 13 second type two node; or

- if said amount of traffic between said first type one node and said second type one
- 15 node exceeds said predetermined threshold, provisioning at least one additional high
- 16 capacity trunk between said first type one node and said second type one node.
  - 20. (cancelled)

Nov-30-2007 04:45pm From-Patterson & Sheridan, LLP - NJ

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## EVIDENCE APPENDIX,

None

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Nov-30-2007 04:45pm From-Patterson & Sheridan, LLP - NJ

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# RELATED PROCEEDINGS APPENDIX

None

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